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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/800,839	03/07/2001	Toshihiro Shimizu	2535US1P	7614

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EXAMINER	
TRAN, SUSAN T	
ART UNIT	**PAPER NUMBER**
1615	17

DATE MAILED: 04/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/800,839	Applicant(s) SHIMIZU ET AL.	
	Examiner Susan Tran	Art Unit 1615	

-- The MAILING DATE of this communication appears on the c ver sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 January 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-7,9-11 and 13-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-7,9-11 and 13-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *16* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Receipt is acknowledged of applicant's Extension of Time, Amendment, and Supplemental Information Disclosure Statement filed 01/30/03.

Information Disclosure Statement

The supplemental information disclosure statement (IDS) submitted on 01/30/03 was filed after the mailing date of the Office Action on 10/09/02. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-7, and 13-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohno et al. US 5,958,453.

Ohno teaches a solid pharmaceutical composition in powder or granular that can be made into tablet suitable for buccal administration (column 2, lines 13-61). The composition comprising active ingredient; sugar, e.g., mannitol or erythritol; and disintegrant, e.g., low substituted hydroxypropyl cellulose at about 1-15 parts by weight base on 100 parts by weight of the solid composition (columns 2 and 5). The active

ingredient can be selected from various classes that is disclosed in columns 3-4. Column 6, lines 59-67 further teaches the dissolution of the tablet, which can be completely dissolved in about 0.1 to 1.0 minute.

Although Ohno is silent as to the teaching of the degree substituted of the hydroxypropyl group, Ohno recognizes the advantages result in obtaining buccal tablet having dissolution time within the claimed range. Therefore, it would have been prima facie obvious for one of ordinary skill in the art to, by routine experimentation select a suitable low-substituted hydroxypropyl cellulose to obtain a rapid disintegrate buccal tablet. The expected result would be a buccal dissolution dosage that has long shelf-life, low toxicity, ease of administration even without water, and having fast disintegration in the oral cavity even without water (column 7, lines 3-25).

Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohno et al., in view of Shimizu et al. US 6,299,904.

Ohno is relied upon for the reason stated above. Ohno is silent as to the teaching of the claimed active ingredients.

Shimizu teaches buccal disintegration tablet comprising active agents, e.g., manidipine HCl, pioglitazone HCl, candesartan cilexetil, and voglibose. Thus, it would have been prima facie obvious for one of the ordinary skill in the art to modify Ohno's formulation using the active ingredients in view of the teaching of Shimizu. The reason for this modification is to obtain a pharmaceutical preparation having the above active

ingredients for oral administration. The unexpected result would be a fast disintegrating tablet with improved disintegrability and/or dissolubility useful for buccal administration.

Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohno et al., and Shashoua et al. US 5,795,909.

Although Ohno teaches variety of active agents useful for the gastrointestinal function, Ohno is silent as to the specific active agent claimed by the applicant, e.g., lansoprazole.

Shashoua teaches pharmaceutical composition in tablet form comprising active ingredients, e.g., pioglitazone, candesartan, manidipine, and lansoprazole (column 35, lines 4-10). Thus, it would have been obvious for one of ordinary skill in the art to modify Ohno's formulation using the active agents in view of the teaching of Shashoua. The reason for this modification is to obtain a buccal disintegrable solid dosage useful for the treatment of the digestive diseases. The expected result would be a storage stable quick dissolve buccal formulation that can be safely administered orally without water.

Response to Arguments

Applicant's arguments filed 01/30/03 have been fully considered but they are not persuasive. Applicant's argument consistently mentioned the '357 reference is confusing. The rejections dated 10/09/02 cited Ohno et al. US 5,958,453, Shashoua et al. US 5,795,909, and Shimizu et al. US 6,299,904. The examiner has not been able to

locate any reference cited as alleged by applicant, *e.g.*, the '357 reference. Nonetheless, according to the content of the arguments in pages 4-6, the examiner assumes that the '357 reference is meant to refer to Ohno et al. (the '453 reference).

Applicant argues that Ohno does not teach that L-HPC is a choice for a solid formulation which disintegrates quickly. Applicant referred to the comparison examples 4 and 5 to allege that with the use of L-HPC, the dissolution time is slower, and therefore, no one skilled in the art would have been motivated to add L-HPC to a preparation to improve disintegrability in light of the experimental results presented. Contrary to the applicant's argument, Ohno is relied upon for the teachings within the four walls patent. Ohno cannot be limited to his best mode as described in the examples. Applicant's attention is directed to Ohno at column 5, lines 21-23, wherein the *preferred* disintegrants include L-HPC. Comparative example 5 shows the buccal dissolution rate with the use of L-HPC is 85 seconds, which is still a desirable disintegration rate useful for buccal administration without being swallowed. Ohno further teaches that his invention is a buccal dissolution tablet having fast disintegrability and dissolubility in the oral cavity (column 6, lines 59-67). Accordingly, such language does suggest to one of ordinary skill in this art to use the L-HPC in a fast disintegrable solid dosage form, and therefore, the cited art does not teach away from the invention.

Applicant's argue that the '357 reference (Ohno) does not enable what the examiner believes it discloses; i.e.-that L-HPC can be put into a formulation to achieve buccal dissolution time of 0.1-1.0 minutes. Contrary to the applicant's argument, applicant claimed rapidly disintegrable, Ohno teaches fast disintegrating tablet. The

term "rapidly disintegrable" does not envision and/or limit the scope of the claims to a dissolution time. Ohno teaches at column 5, lines 21-23, the *preferred* disintegrants include L-HPC. Comparative example 5 shows the buccal dissolution rate with the use of L-HPC is 85 seconds, which is about 1.2 minutes, and therefore, still considers a desirable disintegration rate useful for buccal administration without being swallowed. Accordingly, such language does suggest that L-HPC can be used in a fast disintegrating tablet to achieve a fast disintegrability and dissolubility in the oral cavity.

Applicant alleged that Ohno does not teach any of the methods being claimed. However, applicant's attention is drawn to column 6, lines 30-58, where Ohno teaches blending the pharmaceutically active or medicinal ingredients with the raw materials for the preparations in dosage forms can be carried out by any of the blending techniques, including mixing, kneading, and so on, and the preparation can then be directly compressed into tablet. This is believed to be the teaching of claim 18, which recites the method of preparing a rapidly disintegrable solid preparation comprising "combining" the cited ingredients. Ohno at column 2, lines 42-60; claims 11 and 14, teach a method of improving buccal disintegration or dissolution of a solid pharmaceutical preparation. This is believed to be the teaching of claim 19. The teaching of claim 20 is believed to be disclosed at column 3, line 8, wherein the active ingredients being used are gastrointestinal function conditioning agents or antacids. Thus, Ohno does teach the methods being claimed. Accordingly, the examiner maintains the 103(a) rejection over Ohno et al.

Applicant argues that Shimizu is not properly citable art, due to applicant's earlier priority. Applicant does not understand the request that the translation of the JP 09-136724 be provided. In response to applicant's argument, the translation of the JP 09-136724 is to establish that Shimizu is properly citable art, since the date of this JP patent is 05/27/1997, which is before applicant's earlier priority date (07/28/98).

Applicant argues that Shashoua briefly mentioned the claimed active agents in an oral dosage form, and therefore, Ohno and Shashoua would not have been combined by those skilled in the art. In response to applicant's argument, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Shashoua is relied upon solely for the teaching of well-known gastrointestinal agents.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan Tran whose telephone number is (703) 306-5816. The examiner can normally be reached on Monday through Thursday from 6:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman Page, can be reached on (703) 308-2927. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3592.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1235.

THURMAN K. PAGE
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